IN THE SPECIFICATION:

1. Please amend the paragraph starting on page 2, line 8 as follows:

In the conventional wiring structure for the transmission line, the conductor loss due to the skin effect can be effectively reduced by providing the irregularity on the surface 104 of the signal line 103 facing the ground conductor 101. However, the electromagnetic field generated between the signal line 103 and the ground conductor 101 may easily spread out due to the function of the convex portions in the irregularity at the end portion of the surface 104 of the signal line 103 facing to the ground conductor 101. The electromagnetic field causes electromagnetic induction in other signal lines adjacent to the signal line 103. Thus, there may occur such a problem that the wave shapes of the signals in the adjacent signal lines, in which the electromagnetic induction has been caused, are ~~disturbed~~ distorted.

2. Please amend the paragraph starting on page 2, line 25 as follows:

The present invention has been developed to solve the above-mentioned problem and has an object to provide a wiring structure for a transmission line, which can ~~restrain that~~ minimize the electromagnetic induction ~~is~~ caused in signal lines due to electromagnetic fields generated by other adjacent signal lines.

3. Please amend the following paragraphs starting on page 3, line 15 as follows:

According to this wiring structure, the extent of an electromagnetic field generated by the signal line may become smaller. As a result, ~~In consequence, it may be restrained that~~ electromagnetic induction ~~is~~ caused in other signal lines adjacent to the signal line due to the electromagnetic field is minimized.

In the wiring structure according to the first aspect, the groove may be located at a nearly center position of the facing surface. Alternatively, the facing surface may be provided with a plurality of the grooves. If so, the extent of the electromagnetic field generated by the signal line may become much smaller. As a result, ~~In consequence,~~ it may be more effectively restrained that the electromagnetic induction is caused in the adjacent signal lines.

4. Please amend the paragraph starting on page 4, line 17 as follows:

According to this wiring structure, the extent of an electromagnetic field generated by the signal line may become smaller. As a result, ~~In consequence, it may be restrained that~~ electromagnetic induction ~~is~~ caused in other signal lines adjacent to the signal line due to the electromagnetic field is minimized.

5. Please amend the following paragraphs starting on page 5, line 5 as follows:

In the wiring structure according to the second aspect, a flat ground (a ground of

a plate shape) may be provided between the wiring assemblies. In this case, ~~it may be more effectively restrained that~~ the electromagnetic induction ~~is~~ caused in the adjacent signal lines is minimized.

In the wiring structure according to the second aspect, each of the grooves may be located at a nearly center position of the surface corresponding thereto. Alternatively, each of the surfaces may be provided with a plurality of the grooves. If so, the extent of the electromagnetic field generated by the signal line may become much smaller. As a result, ~~In consequence, it may be more effectively restrained that~~ the electromagnetic induction ~~is~~ caused in adjacent signal lines is minimized.

6. Please amend the following paragraphs starting on page 6, line 18 as follows:

Figs. 2A ~~to 2D~~ , 2B, 2C and 2D are sectional views of other transmission lines according to the present invention;

Figs. 3A ~~to 3C~~ , 3B and 3C are sectional views of other transmission lines according to the present invention;

Figs. 4A ~~to 4C~~ , 4B and 4C are views explaining the skin effect;

7. Please amend the following paragraph starting on page 8, line 24 as follows:

Figs. 2A ~~to 2D~~ , 2B, 2C and 2D are sectional views of transmission lines, each of which shows the structure of the grooves formed on the facing surfaces of the signal line

1 and the ground line 2. Each of the transmission lines is composed of the signal line 1, the ground line 2, and the dielectric 3 interposed between the signal line 1 and the ground line 2. As same as the case of Fig. 1, each of the signal line 1 and the ground line 2 has a groove extending in the transmission direction on its surface facing the other line.

8. Please amend the following paragraphs starting on page 9, line 25 as follows:

Figs. 3A ~~to 3C~~ , 3B and 3C are sectional views of other transmission lines, each of which shows the structures of a groove and a cutout formed on the facing surfaces of the signal line 1 and the ground line 2, respectively. The cutout can be formed by forming the groove ~~to excess~~ from the facing surface toward the opposite surface till the groove penetrates the line. Alternatively, the cutout may be formed from the opposite surface toward the facing surface till it penetrates the line. Fig. 3A shows an example of the cutout, which is formed from the surface opposite to the surface having the groove, namely the surface of the signal line 1 not-facing the ground line 2. Each of Figs. 3B and 3C shows an example of the cutout, which is formed from the surface having the groove, namely the surface of the signal line 1 facing the ground line 2. In each of Figs. 3A to 3C, the cutout is formed only in the signal line 1. However, the cutout may be formed in the ground line 2, not in the signal line 1. Alternatively, each of the signal line 1 and the ground line 2 may be provided with the respective cutout.

When the current changes, the lines of magnetic force 6 are generated or

extinguished. Due to the change of the lines of magnetic force 6 such that the lines of magnetic forces are generated or extinguished, namely due to the change of the magnetic field, there is generated a induction current in the direction ~~to prevent~~ which prevents the magnetic field from being changed. Due to the induction current, the current tends to flow through a region that is less affected by the magnetic field. In general, the faster the change of the current becomes, that is the larger the vibration frequency becomes, the larger the induction current becomes.

9. Please amend the following paragraphs starting on page 10, line 23 as follows:

Figs. 4A ~~to 4C~~ , 4B and 4C are views explaining the skin effect. Fig. 4A shows two electric wires 5 (current lines) and lines of magnetic force 6 generated by the electric wires 5. The electric wires 5, in which currents flow in the same directions to each other, generate the lines of magnetic force 6 orienting in the same directions. When the electric wires 5 are adjacent to each other, they affect ~~to~~ each other. When the currents in the electric wires 5 flow upward in the directions perpendicular to the sheet plane of Fig. 4A in the steady state, the lines of magnetic force 6 orienting counterclockwise are generated in the sheet plane by the currents. As shown in Fig. 4A, the lines of magnetic force 6 generated by the two electric wires 5 orient in the opposite directions to each other in the region between the two electric wires 5. Therefore, the lines of magnetic force 6

generated by the two electric wires 5 negate ~~to~~ each other in the region between the two electric wires 5 so that the lines of magnetic force 6 has an oblong shape surrounding the two electric wires 5.

When the current changes, the lines of magnetic force 6 are generated or ~~extinguished~~ eliminated. Due to the change of the lines of magnetic force 6 such that the lines of magnetic forces are generated or ~~extinguished~~ eliminated, namely due to the change of the magnetic field, there is generated a induction current in the direction to prevent the magnetic field from being changed. Due to the induction current, the current tends to flow through a region ~~that is~~ less affected by the magnetic field. In general, the faster the change of the current becomes, ~~that is~~ the larger the vibration frequency becomes, the larger the induction current becomes.

Each of Figs. 4B and 4C shows the state of the current flowing in each of portions in one signal line, the signal line being divided into nine portions. When the current changes, the uniform current distribution shown in Fig. 4B may be distorted ~~unnatural~~. The reason for this is ~~such~~ that it ~~should be~~ is difficult for the current to flow through the central portion of the signal line which is easily affected by the magnetic field due to other currents because the induction current is generated as described above. Therefore, as shown in Fig. 4C, the current flowing through the corner portions and peripheral portions in the signal line may become more, because the portions are less affected by the magnetic field due to the current flowing through the adjacent lines. Such a phenomenon

that the current density in the peripheral portions of the conductor becomes larger is referred to the skin effect. In particular, the skin effect remarkably appears for the high-frequency. The skin effect is expressed by the following expression 1.

10. Please amend the following paragraph starting on page 13, line 7 as follows:

Each of Figs. 5A and 5B shows the current distribution in the ~~pair~~ transmission line pair. Fig. 5A shows the current distribution in the stacked pair line. Fig. 5B shows the current distribution in the micro strip line. In each of them, a signal line 11 faces a ground line 12. In the ~~pair~~ transmission line pair, an ~~un-uniform~~ non-uniform current distribution is caused due to the skin effect. The regions with oblique lines 10 denote portions having higher current densities in comparison with the other portions. In each of Figs. 5A and 5B, it is illustrated such that nothing exists between the signal line 11 and the ground line 12. However, in fact, a dielectric exits between the signal line 11 and the ground line 12. As the dielectric, for example, ~~there may be used~~ glass, epoxy resin, Teflon or ceramic may be used.

11. Please amend the following paragraph starting on page 14, line 4 as follows:

According to ~~the Gauss~~ Gauss's law, the lines of electric force always meet at right angles with the lines of magnetic force. The lines of electric force start from the positive electric charges in the conductors, and end at the negative electric charges. When the

lines of electric force cross to the surface of the conductors, they are normal to the surface if uniform electric potentials prevail in the conductors. However, they incline to the region in which electric charge distribution is higher. The lines of magnetic force in the clockwise directions, which are perpendicular to the direction along which the current flows through the electric wire, are generated so as to surround the electric wire. The lines of electric force and the lines of magnetic force are distributed in the space so as to hold intervals with the adjacent lines of electric force and the adjacent lines of magnetic force respectively, in accordance with the minimum energy law. In accordance with the electric charge density or the current, the density of the lines of electric force and the density of the lines of magnetic force are increased or decreased.

12. Please amend the following paragraph starting on page 18, line 15 as follows:

The corner portions 26 and 27 are less affected by the electromagnetic field due to the current in the adjacent conductors and tend to concentrate the current therein, as same as the corner portions and peripheral portions shown in Fig. 4C. It may be ~~comprehended~~ understood that the coupling of the stacked pair line increases due to the corner portions 26 and 27. As the result, the characteristic impedance of the stacked pair line whose facing surfaces have the grooves, becomes smaller than that of the simple stacked pair line. Further, because the grooves are provided on the facing surfaces of

the signal line 21 and the ground line 22, the electromagnetic field does not spread out, but is converged to the central portion. Therefore, if a comparison is made among the cases of Figs. 6A, 6B and 7, the extent of the effective electromagnetic field W3 of Fig. 7 is smaller than the extent W1 of Fig. 6A or the extent W2 of Fig. 6B. Because the extent of the effective electromagnetic field W3 is relatively smaller, the crosstalk in the signal line 24 and the ground line 25, each of which is the adjacent transmission line, becomes smaller.

13. Please amend the following paragraph starting on page 23, line 16 as follows:

In the wiring structure shown in Fig. 9B, if the electrostatic capacity caused by the power supply lines 43 and the ground lines 44 is made larger, it can act as a by-pass capacitor. The wiring structure is very effective for transmitting signals at high speed because it can act as ~~the~~ a by-pass capacitor. The wiring structure shown in Fig. 8, 9A or 9B may be stacked to form a wiring structure of a multi-layer type.

14. Please amend the following paragraphs starting on page 20, line 8 as follows:

In the wiring structure, the dielectric 34 is disposed on the upper surface (main surface) of the substrate 35. The signal lines 31 face the ground lines 32 in the dielectric

34. The signal lines 31 and the ground lines 32 form a pair transmission line. Each of the signal lines 31 and the ground lines 32 is provided with grooves extending in the transmission direction on the facing surfaces thereof. The facing surfaces are perpendicular to the upper surface of the substrate 35. Alternatively, the grooves may be provided only on the signal lines 31 or the ground lines 32. The surface output portion 33 for the signal lines 31 is used for picking up the signals in the signal lines 31 to the surface side. Because the surface output portion 33 for the signal lines 31 is exposed outward at the surface of the dielectric 34, a flip chip ~~and so on~~ can be connected to the surface output portion 33. On the substrate 35, the dielectric 34 surrounds the signal lines 31, the ground lines 32 and the surface output portion 33 for the signal lines 31.

In the wiring structure, the signal lines 31 are less affected by the electromagnetic field of the other adjacent signal lines 31. The reason is as follows. That is, the indexes of the spatial distributions of strength of the electric field and strength of the magnetic field are the density of the lines of electric force and the density of the lines of magnetic force. In the stacked pair line or the micro strip line, the space, in which the density of the lines of electric force and the density of the lines of magnetic force are higher, radially extends from the lateral open portions of the pair lines.